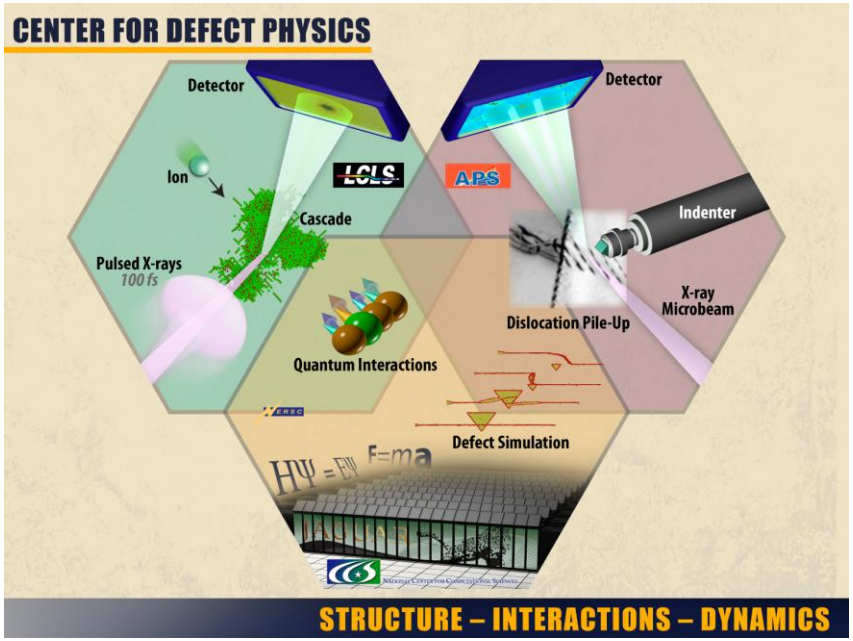
U.S. DEPARTMENT OF ENERGY

Center for Defect Physics

G. Malcolm Stocks (ORNL)

Our goal is to provide a fundamental understanding of materials' defects, defect interactions, and defect dynamics, thereby enabling atomistic control and manipulation of defects and the charting of new pathways to the development of improved materials – materials with ultra-high strength, toughness, and radiation resistance.



We deploy first-of-their-kind measurements and *ab initio* quantum calculations of the structure, interactions, and dynamics of defects in structural materials. The Center focuses on three interrelated thrust areas:

- ***Fundamental Physics of Defect Formation and Evolution during Irradiation***
- ***Fundamental Physics of Defect Interactions during Deformation***
- ***Quantum Theory of Defects and their Interactions***

Oak Ridge National Laboratory — Managed by UT-Battelle for the Department of Energy

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